TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT NUMBER 1000045
CHEMICAL LIME COMPANY - NELSON LIME PLANT

NOMENCLATURE

CLC *Chemical Lime Company*
ADEQ *Arizona Department of Environmental Quality*
IP *Installation Permit*
OP *Operating Permit*
PM_{10} *Particulate Matter less than 10 microns in diameter*
SO_2 *Sulfur Dioxide*
CO *"Consent Order Docket No. A-102-98" issued by ADEQ to CLC, dated 18th day of September, 1998*
ECP *"Emissions Control Procedure" submitted to ADEQ by CLC, dated October 28, 1998*
DCP *"Dust Housekeeping and Fugitive Dust Emissions Control Plan" submitted to ADEQ by CLC, dated October 23, 1998*

I. INTRODUCTION

This permit is the Title V permit renewal for the operation of a Lime Manufacturing Plant and a Limestone Processing Plant in Nelson, Arizona. This is a renewal for Air Quality Permit 0344-86.

A. Company Information

Mailing Address: P.O. Box 370, Peach Springs, Arizona 86434

Facility Address: 2.5 Miles South of US 66, Mile Marker 112, Nelson, AZ 86434 (Approximately six miles east of Peach Springs, Arizona in Yavapai County)

B. Attainment Classification

The Nelson area is designated as Attainment for all criteria pollutants.

II. PROCESS DESCRIPTION

This facility manufactures lime from limestone. Please see application for in depth process description.

III. EMISSIONS

The facility is classified as a Major Source under the Title V program, pursuant to Arizona Administrative Code (A.A.C.) R18-2-101.61. The potential emission rates of the following pollutants are greater than major source thresholds:

A. Particulate matter (4,419 tons per year)
B. Sulfur dioxide (4,308 tons per year)
C. Nitrogen oxides (1,189 tons per year)
D. Carbon monoxide (583 tons per year)

IV. APPLICABLE REGULATIONS

Table 1. Listing of Applicable Requirements

EMISSION UNITS	APPLICABLE REQUIREMENTS	COMMENTS
Open Areas, Roadways/Streets, Material Handling, Storage Piles:		
Open Areas, Roadways/Streets, Material Handling, Storage Piles	A.A.C. R18-2-604, A.A.C. R18-2-605, A.A.C. R18-2-606, A.A.C. R18-2-607, A.A.C. R18-2-612 Consent Order Docket No. A-102-98 Conditions III.20, 21 and 23	All of these operations are non-point sources, and are subject to the requirements of Article 6. In conjunction with the Article 6, the consent order conditions require a *Fugitive Dust Control and Housekeeping Plan* which stipulates control, minimizing or removal of fugitive dust from the following areas: 1. Truck dumping operations into the primary crusher feed hopper; 2. Haul roads and open areas; 3. On catwalks and railings; 4. On plant buildings; 5. On, around, and under conveyors; 6. Around transfer points; and 7. On and around process equipment.
Limestone Crushing & Screening Plant:		
Dump Hopper, Apron Feeder 102, Cleanup Belt Conveyor 102B, Grizzley 102A, Jaw Crusher 103, Belt Conveyor 104, Surge Bin 107, Belt Conveyor 235, Belt Conveyor 215, Vibrating Feeders 216-1, 2 and 3, Vibrating Feeder 201, Belt Conveyor 217, Vibrating Screen 218, Gyratory Crusher 219, Belt Conveyor 224, Belt Conveyor 202, Belt Conveyor 222, Belt Conveyor 220, Vibrating Screen 203, Gyratory Crushers 206 (2), Belt Conveyor 204, Belt Conveyor 207, Vibrating Screen 205, Belt Conveyor 208, Belt Conveyor 209, Chat Silo 210, Belt Conveyor 225, Primary Screen 108, and Supersacks Fill Operation.	A.A.C. R18-2-702(B), A.A.C. R18-2-720(B)	These equipment process limestone. They were all manufactured prior to August 31, 1983 (trigger date for NSPS Subpart OOO). Therefore, they are subject to Article 7 standards.

EMISSION UNITS	APPLICABLE REQUIREMENTS	COMMENTS
Belt Conveyor 226	40 CFR 60.672(a)(1) and (2) and 672(b)	These equipment process limestone. They were all manufactured after August 31, 1983. Therefore, they are subject to NSPS Subpart OOO.
Limestone Kiln Feed System:		
Vibrating Feeders 301 (6), Belt Conveyor 302, Stone Bin 304-1, Stone Bin 304-2, Supersack Load-in Hopper, Weigh Belt Conveyors 329 and 303A and Tube Conveyor	A.A.C. R18-2-702(B) and 720	These equipment process limestone. They were all manufactured prior to August 31, 1983 (trigger date for NSPS Subpart OOO). Therefore, they are subject to Article 7 standards.
Vibrating Screen 328	40 CFR 60.672(b)	These equipment process limestone. They were all manufactured after August 31, 1983. Therefore, they are subject to NSPS Subpart OOO.
Solid Fuel Handling System:		
Track Hopper, Solid Fuel Hopper, Track Hopper Fuel Bin 503, Feeders 504A and B, Crusher 505, Belt Conveyor 506, Weigh Belt 504C, Bucket Elevator 521, Roll Crusher 522, Belt Conveyor 514, Solid Fuel Bin 508, Weigh Feeder 601-1, Screw Conveyor 613-1A, Screw Conveyor 613-1B, Ball Mill 602-1, and Classifier 604.	A.A.C. R18-2-702(B) and A.A.C. R18-2-716(B)	These units were built prior to October 24, 1974 (trigger date for NSPS Subpart Y). They are subject to Article 7 standards.
Belt Conveyor 516, Solid Fuel Bin 517-2, Weigh Feeder 601-2, Ball Mill 602-2, and Classifier 2-604.	40 CFR §60.252(c)	These emission units were built afer October 24, 1974. They are subject to NSPS Subpart Y.
Kiln 1System/Kiln 2 System:		

EMISSION UNITS	APPLICABLE REQUIREMENTS	COMMENTS
Kilns 1 and 2	A.A.C. R18-2-702(B) and 720(B) Consent Order Conditions III.2, 4, 8, 11, 14, 18, 19, 27 and 28	The two units were built prior to May 3, 1977 (trigger date for NSPS Subpart HH), and therefore, are subject to Article 7 standards. The consent order conditions stipulate the maximum material feed rate to the kilns, the *Emissions Control Procedure* describing the methods of operation and maintenance of the Kilns 1 and 2 and their control device, opacity monitoring, recordkeeping and reporting, and the COM QA/QC program.
Dust Bin 1-318/DC 1-321 and Dust Bin 2-318/DC 2-321	A.A.C. R18-2-702(B) and 730(A)(1)	These are unclassified existing sources with stack emissions.
Kiln 1 system: Preheater 305, Rotary Kiln 1, Contact Cooler 310-1, Kiln 1 Dust Bin 318-1, Screw Conveyor 313A-1, Screw Conveyor 313A-2, Screw Conveyor 313A-3, Screw Conveyor 313B, Screw Conveyor 316A, Screw Conveyor 316, Screw Conveyor 318, and Bin Elevator 317. Kiln 2 system: Kiln 2 Preheater, Rotary Kiln 2, Contact Cooler 310-2, Kiln 2 Dust Bin 318-2, Screw Conveyor 2-316, Screw Conveyor 2-316A, Screw Conveyor 2-316B, Screw Conveyor 2-316C, Screw Conveyor 2-316D, Screw Conveyor 2-316E, Screw Conveyor 2-316F, Screw Conveyor 2-316G, and Bin Elevator 2-317.	A.A.C. R18-2-702(B)	These are unclassified existing sources which could emanate identifiable dust plumes that could not pass through a stack, chimney, vent, or other functionally equivalent opening. The plumes from material transfer points between the emission units, for instance, are identifiable plumes.
Front and Back Lime Handling Systems (FLHS and BLHS):		

EMISSION UNITS	APPLICABLE REQUIREMENTS	COMMENTS
FLHS: Vibrating Feeders 340A, B, C, D (4 Feeders), Vibrating Feeder 2-311, Conveyor 411, Apron Conveyor 420, Apron Conveyor 421, Screw Conveyor 413, Roll Crusher 422, Bucket Elevator 423, Screen 432, Undersize Lime Hopper, Hammermill 422, Screw Conveyor 428, Bucket Elevator 424-1, Bucket Elevator 424-2, Bucket Elevator 424-C, Screw 425, Screw 426, Screw 427, Screw Conveyor 471, Screw Conveyor 470, Product Silo 1A (428-1), Product Silo 2A (428-2), Product Silo 3A (428-3), Vibrating Feeder 443-1, Vibrating Feeder 433-1 with Screen Cloth, Vibrating Feeder 443-2, Vibrating Feeder 433-2, Vibrating Feeder 443-3, Vibrating Feeder 433-3, Screw Conveyor 441, Screw Conveyor 461, Dust Recovery Bin, Screw Conveyor 466, Screw Conveyor 465, Belt Conveyor 435, Belt Conveyor 434, and Screw Conveyor 444	A.A.C. R18-2-702(B) and A.A.C. R18-2-730(A)(1)	Both lime handling systems operate on lime. NSPS Subpart OOO, A.A.C. R18-2-720, and A.A.C. R18-2-722 are applicable only to material sizing, conveying, and storing operations that operate on limestone.
BLHS: Rail Car Off-Load Hopper, Screw Conveyor 412, Belt Conveyor 401, Bucket Elevator 403, Screw Conveyor 443, Roll Crusher 444, Screw Conveyor 445, Bucket Elevator 446, Screen 404, Hammermill 405, Screw Conveyor 447, Screw Conveyor 411, Bucket Elevator 406 E, W (2 elevators), Screw Conveyor 408, Screw Conveyor 408A, Screw Conveyor 408B, Screw Conveyor 408C, Hammermill 402-2, Product Silo 1, Product Silo 2, Product Silo 3, Product Silo 4, Product Silo 5, Screw Conveyor 414-2, and Belt Conveyor 402		
Hydrate System:		
Screw Conveyor 701, Screw Conveyor 702, Quicklime Feed Surge Bin, Quicklime Belt Conveyor 704, 4W Pulverizer 706, Screw Conveyor 707, Pug Mill 708, Seasoning Chamber 710, Screw Conveyor 712, Bucket Elevator 719, Air Separator 715, Hammermill 717, Screw Conveyor 718, Bucket Elevator 713, Hydrated Lime Silo 6, Pilot System Storage Bin 1, Pilot System Screw Conveyor 1, Vibrating Mill/Seasoning Chamber (Pilot System), Pilot System Screw Conveyor 2, and Pilot System Storage Bin 2.	A.A.C. R18-2-702(B) and 720(B)	A.A.C. R18-2-720, Standards of Performance for Existing Lime Manufacturing Plants, stipulate the applicability to lime hydrators.
Miscellaneous Drop Points:		
Miscellaneous Drop Points	A.A.C. R18-2-702(B)	These are existing sources subject to Article 7.

EMISSION UNITS	APPLICABLE REQUIREMENTS	COMMENTS
Diesel Generators:		
North Electric Generator, South Electric Generator, and Portable Electric Generator	A.A.C. R18-2-719(C)(1), 719(E), 719(F), 719(H), 719(I), 719(J)	
Fuel Storage Tanks:		
Gasoline Storage Tank 11, Diesel Storage Tank 12, and Diesel Storage Tank for alternate operation	A.A.C. R18-2-710 for Gasoline Storage Tank 11 and 40 CFR 60 Subpart Kb for Diesel Storage Tank 12 and the alternate operation Diesel Storage Tank	

V. COMPLIANCE HISTORY

Compliance history of the source has been reviewed and except Consent Order Docket No. A-102-98 dated 9/18/98, no additional conditions were found as a direct result of an enforcement action that need to be incorporated into the permit as applicable requirements. As discussed in Section IV of this document, the consent order conditions are part of the applicable requirements for this Title V permit.

A. Testing & Inspections

Inspections have been conducted on this source to ensure compliance with the permit conditions. Table 2 below summarizes some of the recent inspections that have been conducted on the source and the results of the inspections.

Table 2. Testing & Inspections

Inspection Date	Level of Inspection	Type of Inspection	Results
05/27/99	I	Performance Test	Emissions compliance testing of Kilns 1 and 2
06/09/99	II	Periodic (Unannounced)	Source was found to be in compliance with air quality regulations
11/23/99	I	Performance Test	Emissions test of hydrator separator
04/04/00	I	Performance Test	Emissions compliance testing of Kilns 1 and 2
06/14/01	II	Routine (Unannounced)	Source was found to be in compliance with air quality regulations
06/28/01	I	Performance Test	Emissions compliance testing of Kilns 1 and 2

B. Excess Emissions

Some recent reports of "Excess Emissions" are outlined in the Table 3 below.

Table 3. Excess Emissions

Date	Excess Emissions Reported	Duration in Minutes	Cause of Excess Emissions	Steps Taken to Limit Excess Emissions
07/15/01	41% opacity from Kiln 2	12	Unknown	Inspected kiln system, related auxiliary equipment, and COM unit
07/02/01	44 - 51% opacity from Kiln 1	6	Gravel bed malfunction - module #7 not operating correctly	Adjusted kiln air flow
06/02/01	43% opacity from Kiln 1	6	Start-up with fuel torches	Adjusted fuel torch air/fuel ratio - leaned out torch fuel
06/01/01	64% opacity from Kiln 1	60	Gravel bed hydraulic system failure	Shut down kiln
05/15/01	48% opacity from Kiln 1	18	Start-up with fuel torches	Adjusted fuel torch air/fuel ratio
04/24/01	46% opacity from Kiln 1	24	Start-up with fuel torches	Adjusted fuel torch air/fuel ratio
04/24/01	41% opacity from Kiln 1	6	Measuring and adding media to the gravel bed modules	Finished with the modules
03/27/01	41% opacity from Kiln 1	6	Start-up kiln with fuel torches after power bump	Shut kiln down
03/27/01	47% opacity from Kiln 1	6	Taking kiln down	Adjusted fans
03/26/01	41% opacity from Kiln 1	6	Start-up kiln with fuel torches after power bump	Took kiln down
03/26/01	47% opacity from Kiln 1	6	Taking kiln down	Adjusted fans
03/12/01	44 - 65% opacity from Kiln 1	6 - 12	Start-up with fuel torches	Adjusted fuel torch
01/28/01	54% opacity from Kiln 1	6	Start-up with fuel torches	Adjusted fuel torch
01/05/01	46 - 54% opacity from Kiln 1	6 - 24	Start-up kiln with fuel torches after power bump	Adjusted fuel torch

VI. PREVIOUS PERMITS AND CONDITIONS

Table 4 below outlines the permits that have been issued to the source. Subsequent tables cross reference the previous permit conditions to determine if they are to be revised, kept, deleted or streamlined in the permit

renewal. If a condition from the previous permit is deleted or if a new standard becomes applicable, comments are provided explaining the reasoning for the same.

Table 4. Previous Permits

Permit Issuance Date	Permit Number	Application Basis
11/01/73	1046	Installation Permit for Kiln 1 System
11/09/77	1111	Installation Permit for Kiln 2 System
08/04/82	0273-83	Operating Permit
12/29/83	0305-84	Operating Permit
04/16/85	0336-85	Operating Permit
01/03/86	0344-86	Operating Permit
03/09/88	65011	Installation Permit - Hydrator
08/27/91	1226	Installation Permit - Two Generator Sets
08/27/91	1230	Installation Permit - Modification to Back Lime Handling System
	050698P0-98	Unissued Operating Permit for whole facility
	M0698P1-99	Unissued Operating Permit for Nelson quarry facility
12/02/97	1000627	Minor Permit Revision to Permit No. 0344-86
04/22/98	1000722	Minor Permit Revision to Permit No. 0344-86
04/24/99	1000988	Minor Permit Revision to Permit No. 0344-86
05/20/99	1001006	Minor Permit Revision to Permit No. 0344-86
06/03/99	1001028	Minor Permit Revision to Permit No. 0344-86
08/11/99	1001049	Minor Permit Revision to Permit No. 0344-86
08/11/99	1001054	Minor Permit Revision to Permit No. 0344-86
01/06/00	1001178	Minor Permit Revision to Permit No. 0344-86
07/10/00	1001287	Minor Permit Revision to Permit No. 0344-86
01/04/01	1001304	Minor Permit Revision to Permit No. 0344-86
11/26/01	1001689	Minor Permit Revision to Permit No. 0344-86
12/04/01	1001596	Minor Permit Revision to Permit No. 0344-86
Pending	1001747	Minor Permit Revision to Permit No. 0344-86

Table 5. Installation Permit No. 65011

Permit No. 65011 Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
A				x	Requirement that the source comply with all applicable regulations
B		x			PM emission limitation and opacity limitation of 40%
C			x		Mass emissions performance test is required for the hydrator within 180 days of permit receipt
D	x				Permit expiration date

Table 6. Installation Permit No. 1226

Permit No. 1226 Attachment "B" Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
I	x				Installation of two 1150 kW generators. The installation has completed.
II.A		x			PM-10 and SO2 emission limits
II.B		x			40% opacity limit
II.C			x		Emission limits for air contaminants. Only the NOx limit is retained since this IP capped the NOx emissions under the significant level of 40 tpy to net out PSD/NSR review.
II.D			x		Excess emissions definition. The NOx excess emission definition has been kept.
III				x	Stack sampling facility requirements. Attachment "A" of the permit renewal address the requirements.
IV			x		Performance test requirements for NOx; Pre-test meeting requirement. One time test during the term of the new permit is required.
V		x			Fuel limit - #2 Diesel.
VI		x			Fuel usage limitation and record keeping requirement.
VII		x			Operating hours limitation.

Table 7. Installation Permit No. 1230

Permit No. 1230 Attachment "B" Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
I	x				Installation of 5 screw conveyors, bucket elevator, double roll crusher, 3 three surface screens. The installation has completed.
II.A	x				PM emission limit. This limit comes from NSPS Subpart OOO for Nonmetallic Mineral Processing Plants. The definition of nonmetallic minerals under this Subpart, however, does not include lime. The limit, therefore, is not applicable for lime handling facilities.
II.B	x				Opacity limit - 7% from baghouse. This limit comes from NSPS Subpart OOO for Nonmetallic Mineral Processing Plants. The definition of nonmetallic minerals under this Subpart, however, does not include lime. The limit, therefore, is not applicable for lime handling facilities.
II.C	x				Opacity limit - 10% from transfer points on belt conveyors and any other facility except crushers. This limit comes from NSPS Subpart OOO for Nonmetallic Mineral Processing Plants. The definition of nonmetallic minerals under this Subpart, however, does not include lime. The limit, therefore, is not applicable for lime handling facilities.
II.D	x				Emission limits. The limits originated from the source estimated potential to emit. They are not technical based standards.
II.E	x				Excess emission definition. The definition reference to the NSPS Subpart OOO limits for Nonmetallic Mineral Processing Plants. The nonmetallic minerals under this Subpart do not include lime. The definition, therefore, is not applicable for lime handling facilities.
III				x	Stack sampling facility requirements. Attachment "A" of the permit renewal address the requirements.
IV	x				Performance test requirements for PM. The stack test is not required under the new permit on a regular basis.
V		x			Requires installation, operation, and maintenance of baghouse on #1 lime handling facility.

VI			x		Lime production limitation and record keeping requirement.

Table 8. Operating Permit No. 0344-86

Permit No. 0344-86 Attachment "A" Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
I		x			Operation requirements for all equipment at the facility.
II			x		The facility must be operated in accordance with all applicable regulations. The condition is seen in Attachment "A" of the new permit.
III			x		Malfunction and excess emission requirements. The revised requirements are seen in Attachment "A" of the new permit.
IV		x			Right to entry requirements
V		x			Transfer of operations requirement
VI		x			Permit posting requirement
VII		x			Permit revocation requirements
VIII			x		Order of abatement/violations of terms and conditions requirement. The revised requirement is seen in Attachment "A" of the new permit.
IX			x		Permit renewal must be submitted no less than 60 days prior to permit expiration. The six month prior is to replace the 60 days.
X.A			x		Mass emission testing requirements for Kilns #1 and #2 will resume with the next annual operating permit unless non-compliance is observed during the permit year. Annual test is required in the new permit.
X.B	x				Notification requirement by telephone and letter prior to using Kiln #2.
X.C			x		Dust emission precautions must be used, not limited to the use of water or dust suppression techniques on the dirt roads.

Table 9. Permit Revision No. 1000627

Permit No. 1000627 Attachment "B" Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	

I.1	x				Replace single deck vibrating screen #328 with triple deck Tyler screen. The replacement has completed.
I.2	x				Installation of a Side-Kick separator on existing belt conveyor #104. The installation has completed.
I.3		x			10% opacity limit for triple deck screen #328
II			x		Opacity performance test on triple deck screen #328. The screen is subject to the opacity observation procedure under the permit.
III.1		x			Record occurrence and duration of any start-up, shutdown, and malfunction of #328 and associated air pollution control devices
III.2		x			Maintenance test measurement file for #328 for 2 years after test
IV	x				Notification requirements

Table 10. Permit Revision No. 1000722

Permit No. 1000722 Attachment "B" Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
X.D			x		Installation and operation requirement for negative pressure baghouse on Kiln #2. Operation requirement has been retained.
X.E		x			PM performance test requirements for Kiln #1 and Kiln #2. An annual testing is required under the new permit.

Table 11. Permit Revision No. 1000988

Permit No. 1000988 Attachment "B" Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
I.A.1		x			40% opacity limit for vibrating mill/seasoning chamber
I.A.2		x			PM emission limit for vibrating mill/seasoning chamber
I.B		x			Air pollution control maintenance and operation requirements for Ducon Slaker scrubber on vibrating mill/seasoning chamber
II.A.1		x			40% opacity limit for storage silos

II.A.2		x			PM emission limit for storage silos
II.A.3		x			Pollution abatement requirement
II.B		x			Air pollution control installation, maintenance, and operation requirements for fabric filters on top of each silo

Table 12. Permit Revision No. 1001006

Permit No. 1001006 Attachment "B" Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
I.A.1		x			PM emission limit for hammer mill air classifier, screw conveyors, and bucket elevators
I.A.2		x			40% opacity limit for hammer mill air classifier, screw conveyors, and bucket elevators
I.A.3		x			Pollution abatement requirement
I.B		x			Air pollution control maintenance and operation of American Air Filter Millenium baghouse to control emissions from the hammer mill, air classifier, screw conveyors, and bucket elevators
I.C			x		Performance test requirement for baghouse. One time stack test during the permit term is required.

Table 13. Permit Revision No. 1001028

Permit No. 1001028 Attachment "B" Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
II.A.1		x			10% opacity limit for Chat silo (#210) to belt conveyor (#226) transfer point
II.A.2		x			Transfer point between #210 and #226 enclosure requirement
II.A.3.a			x		Performance test requirement on #226 from #210. A opacity observation procedure is required under the new permit to assure compliance with the opacity standard.
II.A.3.b	x				Performance test notification
II.A.3.c		x			EPA Test Method #9 required
II.A.3.d			x		Compliance certification/ establishing violations

II.A.4	x				Notification of start-up of #226. The initial startup has completed.
II.B.1		x			40% opacity limit and method 9 required for transfer point #226 to truck
II.B.2		x			Air pollution control installation, maintenance, and operation of water spray bars on transfer point #226 to truck

Table 14. Permit Revision No. 1001049

Permit No. 1001049 Attachment "B" Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
I.A.1		x			PM emission limit for generators
I.A.2		x			40% opacity limit for generators
I.A.3		x			SO2 limit for generators
I.A.4		x			Fuel limitations - Type and sulfur content
I.B.1		x			Record daily sulfur content and lower heating value of fuel
I.B.2		x			Report exceedances of sulfur fuel content

Table 15. Permit Revision No. 1001054

Permit No. 1001054 Attachment "B" Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
I.A.1		x			PM emission limit for replacement screen #108
I.A.2		x			40% opacity limit for replacement screen #108
I.B		x			Air pollution control installation, operation, and maintenance of dust collector #234 to control emissions from replacement screen #108

Table 16. Permit Revision No. 1001178

Permit No. 1001178 Attachment "B" Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	

I.A		x			40% opacity limit requirements for new hopper, screw conveyors, bucket elevator, hammer mill #422
I.B		x			PM emission limit for new hopper, screw conveyors, bucket elevator, hammer mill #422
II		x			Air pollution control operation and maintenance baghouse (DC 430) to control emissions from new hammer mill and specific material drop points

Table 17. Permit Revision No. 1001287

Permit No. 1001287 Attachment "B" Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
A		x			40% opacity limit for new diverter gate and screw conveyor
B		x			PM emission limit for new diverter and screw conveyor

Table 18. Permit Revision No. 1001304

Permit No. 1001304 Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
I		x			40% opacity limit for hydrate system
II		x			PM emission limit for hydrate system

Table 19. Permit Revision No. 1001596

Permit No. 1001596 Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
I.1		x			40% opacity limit for the Front and Back Lime Handling Systems (FLHS and BLHS)
I.2		x			PM emission limit for the FLHS and BLHS
II.1		x			Operation of FLHS Dust Collector 430
II.2		x			Operation of retractable bulk loading spout in conjunction with BLHS Dust Collector 414
II.3		x			Enclosure at the transfer point connecting Screen 404 to BLHS New Screw Conveyor

Table 20. Permit Revision No. 1001689

Permit No. 1001689 Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
I.1		x			40% opacity limit for the transfer point linking Conveyor 704 to the new chute
I.2		x			PM emission limit for the Hydrator after the revision
II		x			Enclosure at the transfer point linking Conveyor 704 to the new chute

Table 21. Permit Revision No. 1001747

Permit No. 1001747 Condition	Determination				Comments
	Delete	Kept	Revise	Streamline	
I.1				x	This permit revision allows CLC to open a new storage area to stockpile additional coal/petroleum coke. All conditions will be incorporated into the new permit, and streamlined under corresponding permit sections.
I.2				x	
II.1				x	
II.2				x	
II.3				x	

VII. MONITORING AND RECORDKEEPING REQUIREMENTS

The following monitoring approaches have been prescribed in the permit :

A. Open Areas, Roadways/Streets, Material Handling, Storage Piles

Non-point sources are subject to the 40% opacity standard and other Article 6 requirements. Periodic monitoring for opacity standard entails a biweekly visible emissions survey in accordance with an ADEQ - approved observation plan, by a certified Method 9 observer. If the visible emissions survey indicates that a Method 9 reading may be required, the observer shall do so, and maintain records of the results. Any observed exceedance of the opacity standard should be reported appropriately. This approach, termed the Visible Emission Observation Procedure, is defined in Part I(D) of Attachment B. The requirement to conduct a bi-weekly Visible Emissions Observation Procedure is presented in Paragraph II(B)(1) of Attachment B.

Article 6 regulations also contain applicable requirements for non-point source emissions. These regulations require CLC to employ various control methods to suppress particulate emissions. Paragraph II(A)(2) of Attachment B lists the various methods of dust suppression that may be used. By not restricting CLC to use only one of the methods, the permit provides the flexibility required to facilitate employment of effective control measures. Periodic monitoring data for these applicable requirements is generated in two ways by this permit:

(i) The bi-weekly Visible Emissions Observation Procedure conducted as monitoring for the 40% opacity

standard will provide data that can be used to investigate the level of visible emissions from non-point sources during a compliance timeframe.

(ii) CLC is required to maintain a record of the kind of control measures that were employed to suppress particulate emissions. This periodic monitoring requirement is specified in Paragraph II(B)(2) of Attachment B of the permit. In recognition of the fact that this requirement may sometimes be highly paper-intensive and result in reduced flexibility of operations, the permit provides an alternative in Paragraph II(B)(3). Paragraph II(B)(3) states that CLC may maintain a Non-Point Source Monitoring Plan that serves as a record of the control measures that were employed by CLC to mitigate dust emissions from non-point sources. To satisfy its function as a monitoring tool, the Non-Point Source Monitoring Plan should contain some minimum elements of information such as :

(1) Types of control measures employed on an activity-specific basis;
(2) Frequency of application of control measures;
(3) A system for logging variations from the strategy outlined in the Non-Pont Source Monitoring Plan.

The Non-Point Source Monitoring Plan has to be submitted as part of the initial application, and will undergo public and EPA review along with the rest of the permit. If CLC fails to submit the Non-Point Source Monitoring Plan along with the initial application, CLC will be required to comply with the monitoring requirements of Paragraph II(B)(2), till such time that a significant revision is processed to allow CLC to avail of Paragraph II(B)(3). As part of the significant revision procedures, the Non-Point Source Monitoring Plan will undergo public and EPA review.

It should be noted that the Non-Point Source Monitoring Plan is a monitoring tool. CLC is required to use one of the methods outlined in Paragraph II(A)(2) of the permit, and to maintain a record of the method that was used. Additions to methods listed in the original Non-Point Source Monitoring Plan may or may not require prior approval, as discussed in the following:

(1) If the new method is already listed in Paragraph II(A)(2), then prior approval from the Director is not required, as stated by Sub-Paragraph II(B)(3)(c). The Director will however, have to be notified of such changes. These notifications will have to be recorded in the Non-Point Source Monitoring Plan by CLC, and will also be added to the copy of the Non-Point Source Monitoring Plan that is maintained at ADEQ.

(2) If CLC desires to use a method that is not on the list in Paragraph II(A)(2), prior approval for usage of this mechanism has to be obtained from the Director by relying on the appropriate permit revision mechanism. Once approval is granted, CLC can initiate usage of the product, and record its usage in the Non-Point Source Monitoring Plan.

In conjunction with the various control methods outlined under Paragraph II(A)(2) of Attachment B to suppress particulate emissions, CLC is also required by the permit to implement the *Dust House keeping and Fugitive Dust Emissions Control Plan* submitted by CLC in compliance with the *Consent Order Docket No. A-102-98*. This plan is elaborated in Attachment D of the permit.

B. Kilns 1 and 2

Opacity is monitored by a Continuous Opacity Monitor (COM). One monitor has to be maintained on each stack. This requirement is in Sub-Paragraph VI(B)(3)(a) of Attachment B.

Kiln 1 and Kiln 2 are required to comply with a particulate emission standard. Proper maintenance and operation of the control device is key to meeting the standard. This permit requires CLC to perform a stack test every year combined with monitoring stack gas opacity to fulfill the periodic monitoring requirements for particulate matter emissions. Although no data is available to directly correlate opacity to particulate matter emissions, monitoring stack gas opacity would indicate potential problems with the air pollution control device. If corrective actions are taken to rectify the problems associated with the pollution control device, then compliance can be inferred on the basis that the source operates its pollution control equipment in a manner consistent with good air pollution control practices. An opacity of 25% was chosen as a baseline level of operations for Kiln 1, and a level of 10% was chosen for Kiln 2. The opacity limit is 40% for this source. Opacity above 25% (or 10%) but less than 40% does not hold the source in violation of either the opacity or the particulate matter standard, but merely requires the source to identify and alleviate the problem by taking corrective actions if necessary to reduce the opacity to less than 25% (or 10%). However, not initiating corrective actions, or not taking corrective action if problems with the pollution control equipment are found, could potentially hold the source in violation of the permit terms. CLC is required to record the results of the investigation and the corrective actions taken, if any, and the date & time on which the action was taken. This approach is presented in Sub-Paragraph VI(B)(3)(b) of Attachment B.

C. Point Sources other than Kilns 1 and 2

The Control Device Monitoring and Maintenance Procedure defined in Part I(C) of Attachment B is used as periodic monitoring for dust collectors. Proper maintenance of dust collectors is critical to ensure compliance with the particulate and opacity standards applicable to these point sources. CLC is required to implement the maintenance program on a monthly basis. CLC is also required to implement the Visible Emissions Observation Procedure defined in Part I(D) of Attachment B, once every two weeks.

D. Fugitive Emissions other than Open Areas, Roadways/Streets, Material Handling, Storage Piles

These emissions are subject to a 40% opacity standard. Monitoring for these emissions is via the Visible Emissions Procedure defined in Part I(D) of Attachment B, once every two weeks.

VIII. TESTING REQUIREMENTS

Annual performance tests for opacity and particulate matter (PM) are required at each of Kilns 1 and 2 stacks. The stack testing has to be conducted while combusting solid fuel. In addition, once during the permit term, CLC is required to test the Hydrator for PM and the North and South Diesel Generators for nitrogen oxides.